What is claimed is:

1. A method of reducing a flow-induced disturbance on an actuator arm of a disc drive, comprising steps of:

(a) receiving a gas flow generated by a rotation of a first disc of the disc drive; and

(b) guiding the received flow along a surface mechanically isolated from the actuator arm so as to cause the flow to include a substantial inward radial component and to be more closely aligned along a leading edge of the actuator arm.

2. The method of claim 1 in which the disc drive further includes a second disc configured for co-rotation with the first disc, and in which the guiding step (b) is performed without extending the surface between the first and second discs.

3. The method of claim 1 further comprising a step (c) of redirecting the guided flow with the leading edge of the actuator arm before the guided flow travels 1/4 of a revolution of the disc.

4. The method of claim 1 in which the disc has a nominal radius R, in which the surface has a horizontal cross-section with a minimum macroscopic radius of curvature greater than R/100 so that the guiding step (b) is performed with a minimal drag-induced energy loss.

5. A method of reducing a flow-induced disturbance on an actuator arm of a disc drive, comprising steps of:

(a) receiving a gas flow generated by a rotation of a first disc of the disc drive; and

(b) guiding the received flow along a surface mechanically isolated from the actuator arm so as to cause the received flow to include a substantial inward radial component so as to be more closely aligned along a leading edge of the actuator arm by directing the received flow through a channel that is stationary with respect to a housing.

6. The method of claim 5 in which the disc has a nominal radius R and in which the surface has a horizontal cross-section with a minimum macroscopic radius of curvature greater than R/100 so that the directing step (b1) is performed with a minimal drag-induced energy loss.

7. The method of claim 5 in which the disc drive further includes a second disc configured for co-rotation with the first disc, and in which the channel has a vertically uniform cross section so that the radial component of the guided flow will be larger between the discs than above the discs.

8. The method of claim 5 in which the guiding step (b) includes a step (b1) of expelling at least part of the guided flow toward an inner diameter of the disc.

9. The method of claim 8 in which the guiding step (b) further includes steps of:

(b2) combining the expelled flow with a tangent flow traveling along an edge of the disc so that the combined flow has a net flow direction with an inward radial component;

(b3) redirecting the combined flow again with the leading edge of the actuator arm before the combined flow travels 1/4 of a revolution of the disc so that the flow-induced disturbance on the actuator arm is reduced by the inward radial component of the net flow direction.

10. The method of claim 5 in which the flow of the receiving step (a) has a flow speed and in which the guiding step (b) includes a step (b1) of maintaining the flow speed within 50% while the received flow remains within the channel.

11. The method of claim 5 in which the disc has a nominal radius R and in which a narrowest cross section along the channel has a width greater than R/100 so that the channel can accommodate a significant flow.

12. A method of reducing a flow-induced disturbance on an actuator arm of a disc drive, comprising steps of:

(a) receiving a gas flow generated by a rotation of a first disc of the disc drive, the flow having an initial turbulence level corresponding to an initial Reynolds number T;

(b) guiding the received flow along a surface mechanically isolated from the actuator arm so as to make the flow more turbulent and to cause the flow to include a substantial inward radial component so as to be more closely aligned along a leading edge of the actuator arm; and

(c) while a majority of the guided flow has a larger Reynolds number > 1.05T, redirecting the guided flow with the leading edge of the actuator arm.

13. The method of claim 12 further comprising a step (c) of redirecting the guided flow with the leading edge of the actuator arm before the guided flow travels 1/4 of a revolution of the disc.

14. The method of claim 12 in which the disc has a nominal radius R, in which the surface has a horizontal cross-section with a minimum macroscopic radius of curvature greater than R/100 so that the guiding step (b) is performed with a minimal drag-induced energy loss.

15. The method of claim 12 in which the disc drive further includes a second disc configured for co-rotation with the first disc, and in which the guiding step (b) is performed without extending the surface between the first and second discs.